

-continued

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1. An artificial RNA nanostructure molecule, wherein the molecule comprises a multiple branched RNA junction motif comprising at least one RNA oligonucleotide, and a brain tumor targeting module, wherein the module is coupled to an RNA junction motif.

2. The molecule of claim 1 further comprising at least one bioactive agent coupled to the RNA junction motif.

3. (canceled)

4. The molecule of claim 1, wherein the RNA oligonucleotide comprises at least one chemical modification at the 2' position.

5. The molecule of claim 4, wherein the modification comprises 2' Fluoro, 2' Amine, 2' O-Methyl, or a combination thereof.

6. The molecule of claim 1, wherein the motif is a three-branched RNA junction motif.

7. (canceled)

8. The molecule of claim 1, wherein the diameter of the molecule is at least about 40 nm or less.

9. (canceled)

10. (canceled)

11. The molecule of claim 1, wherein the molecule has a zeta potential ranging from about -50 mV to about 50 mV.

12. (canceled)

13. The molecule of claim 1, wherein the multiple branched RNA comprises a nucleotide sequence 5'-UUG CCA UGU GUA UGU GGG AUC CCG CGG CCA UGG CGG CCG GGA G-3' (SEQ ID NO: 6) or 5'-GATAAGCT CTC CCG GCC GCC ATG GCC GCG GGA T-3' (SEQ ID NO: 7).

14. (canceled)

15. The molecule of claim 6, wherein a branch of the three-branched RNA junction motif comprises an a3WJ RNA module (SEQ ID NO: 1); a b3WJ RNA module (SEQ ID NO: 2); a c3WJ RNA module (SEQ ID NO: 3); or a combination thereof.

16. (canceled)

17. The molecule of claim 1, wherein RNA oligonucleotides comprises at least 6 nucleotides in length.

18. (canceled)

19. (canceled)

20. (canceled)

21. The molecule of claim 1, wherein the brain tumor targeting module comprises a ligand that binds to at least one brain tumor cell surface marker.

22. The molecule of claim 21, wherein the ligand binds to a folate receptor, an EGFR, a transferrin receptor, an RGD, or a combination thereof.